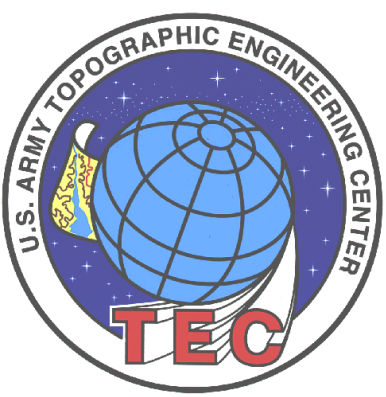


Line-of-Sight Technical Working Group Meeting

April 18th, 2004

American Congress on Surveying and Mapping Conference

Line-of-Sight Technical Working Group Meeting

- LOS TWG background
- TWG Goals
- Makeup of the group
- Mission Statement/Charter
- Workshop
- Web page
- Next meeting

Line-of-Sight Technical Working Group Meeting

Background:

- The impetus for the LOS TWG was an informal request from the Project Director of the Combat Terrain Information Systems (CTIS) to help coordinate the activities of various entities such as Battlefield Terrain Reasoning and Awareness (BTRA) and Commercial Joint Mapping Tool Kit (C/JMTK) as well as sort out/characterize some of the application software performance issues brought to light by TEC's testing activities.
- Then used as an opportunity to bring together Army and Army community expertise to address LOS standardization process. The group was then expanded to included all the services and then anyone working for public agencies (Federal, State and Local) or private business.

Line-of-Sight Technical Working Group Meeting

Goals:

- **Provide standard reference data and processes for testing GOTS/COTS LOS application software.**
- **Produce a living document detailing different approaches to LOS and their tradeoffs based on the requirements of the project.**
- **Improve on existing methodology used to field-validate LOS algorithms and build upon current LOS body of knowledge.**
- **Identify LOS algorithms which are best in certain situations based on the requirements of the project.**
- **Provide a primer which introduces all of the things to consider when developing/implementing revised/new algorithms.**
- **Keep track of R&D efforts worldwide that effect LOS issues via an annual**

Issues about the makeup of the group

- **Do we intend on having a formal charter and mission statement?**

  Yes, will discuss in detail later in the meeting

- **Do we have all the right LOS players involved in the group?**

  For now Yes, but we always need to look to expand.

- **How often should we meet?**

  Four times a year March, June, September and December, with one meeting being a workshop for tracking R&D efforts

- **Where should we meet?**

  Workshop held in conjunction with some other organizations meeting [ACSM is very interested].

  March at annual meeting of ACSM, June at TEC, September at TEC in years that TEC has Geospatial Information TEM [2003, 2007] or before SISO (Simulation Interoperability Standards Organization)

CHARTER FOR THE ARMY'S TECHNICAL WORKING GROUP (TWG) FOR LINE-OF-SIGHT (LOS) ALGORITHMS SUPPORTING MODELS AND SIMULATIONS (M&S) AND COMMAND, CONTROL, COMMUNICATINS, COMPUTERS, AND INTELLIGENCE (C4I) SYSTEMS (SHORT NAME – LINE OF SIGHT ALGOIRHTM TWG) (LOS TWG)

I. BACKGROUND. The Army's Modeling & Simulation and C4I systems employ program is made up of scores of different, independently developed models and simulations. Virtually every model uses an algorithm determining LOS. These algorithms were developed for the purpose of an individual model and little considerations was given to the differences between the algorithms of the different models. In these days where models are being confederated, interoperability is a problem that is little understood and virtually no effort is being undertaken to resolve this problem. The Army LOS TWG is a major effort to understand the differences in algorithms and to educate users about the differences and the affect these differences have on the models.

II. AUTHORITY. The LOS TWG is established by the Topography, Imagery & Geospatial Information Operations Division's Geospatial Information and Imagery Requirements Branch (GIIRB) of the Engineer Research and Development Center (ERDC)/ Topographic Engineering Center (TEC) as an expert advisory body authorized to conduct pertinent analyses, disseminate relevant information, and provide non-binding technical guidance and recommendations on LOS issues.

III. VISION. Create a forum where inherent Army expertise on LOS algorithms, analyses, and related issues can be utilized to effectively and efficiently provide technical guidance and support to the warfighter [Future Combat System (FCS) and Objective Force (OF)].

IV. PURPOSE. The purpose of the LOS TWG is to identify LOS algorithms that are currently being used, determine which should be established as a standard for comparison purposes, educate users about how the different algorithms differ from each other and their appropriate uses, and to as great an extent as possible, coordinate/consolidate ongoing LOS analyses/activities within the Army M&S and C4I Geospatial Information (GI) communities.

I. ROLES AND RESPONSIBILITIES.

a. *Teams*. The GIIRB of the TIG Operations Division (ERDC/TEC) will chair the LOS TWG composed of stakeholders from the Army's C4I & M&S communities. The team will include (but not be limited to) members from: Combat Terrain Information Systems (CTIS), Battlefield Terrain Reasoning and Awareness (BTRA), TRADOC Program Integration Office - Terrain Data (TPIO-TD) and the TRADOC Analysis Center - White Sands Missile Range (TRAC - WSMR)
The TWG chair may designate other representatives.

b. *Funding*. The tasks and action plan evolves from the LOS TWG will correlate to existing organizational missions. The mission to design, develop and establish authoritative, re-usable, efficient algorithms will reduce the interoperability problem resident in today's systems. Costs associated with the LOS TWG include travel and project work and will be paid for with organizational mission funds.

II. TASK OBJECTIVES.

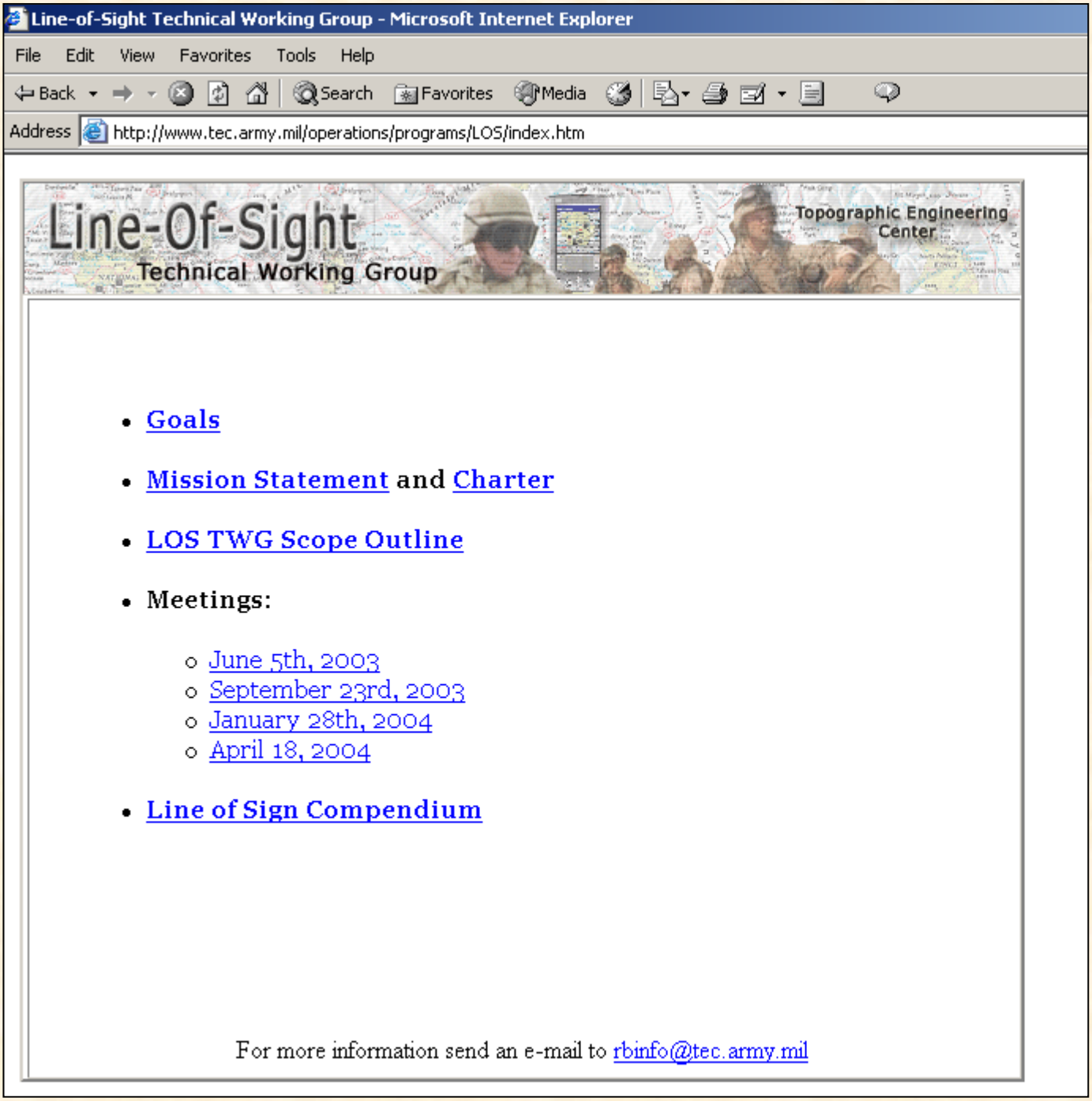
- Provide standard reference data and processes for testing GOTS/COTS LOS application software.
- Produce a living document detailing different approaches to LOS and their tradeoffs based on the requirements of the project.
- Improve on existing methodology used to field-validate LOS algorithms and build upon current LOS body of knowledge.
- Identify LOS algorithms that are best in certain situations based on the requirements of the project.
- Provide a primer which introduces all of the things to consider when developing/implementing revised/new algorithms.
- Keep track of R&D efforts worldwide that affect LOS issues via an annual workshop.

III. LEADERSHIP SUPPORT AND INTENT. By working together, we will change the way we do business – resources will be saved and our soldiers will be better served.

Mission Statement:
Line of Sight Technical Working Group (LOS TWG)

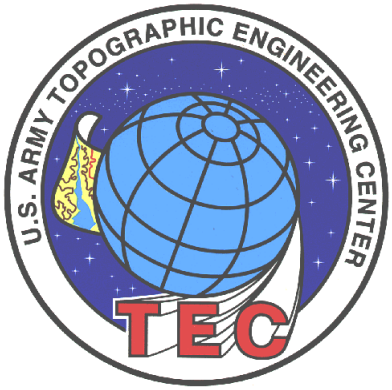
Use working group expertise on LOS algorithms, analyses, and related issues to effectively and efficiently provide technical guidance and support to all military and commercial LOS applications.

Line-of-Sight, Technical Working Group



http://www.tec.army.mil/operations/programs/L

or: www.tec.army.mil
what we do
Programs & Projects
Line-of-Sight, Technical Working Group



Line-of-Sight Technical Working Group

You are being invited to attend the US Army Topographic Engineering Center sponsored Line-of-Sight Technical Working Group (LOS TWG).

The meeting has been scheduled for July 28, 2004 at the US Army Corps of Engineers Topographic Engineering Center in Alexandria, Virginia.

For more information contact Ray Caputo - Chairman of the LOS TWG

at 703.428.6784 or raymond.g.caputo@erdc.usace.army.mil